

**PLECTRANTHUS BLAKEI (LAMIACEAE), A NEW SPECIES FROM
CENTRAL QUEENSLAND**

by

PAUL I. FORSTER*

ABSTRACT

Forster, P.I. *Plectranthus blakei* (Lamiaceae), a new species from central Queensland. *Muelleria* 7(4): 417–420 (1992). — *Plectranthus blakei* P. Forster *sp. nov.*, from the Blackdown Tableland area, central Queensland is described with notes on its affinities, habitat and conservation status.

INTRODUCTION

In May 1984 I visited Blackdown Tableland National Park in central Queensland, and collected plants of a *Plectranthus*. This taxon had been previously collected from Blackdown Tableland on a small number of occasions. The two earliest collections *Gittins 906* and *Johnson 1102* were mentioned by Blake (1971, p 40) in his account of *P. parviflorus* with the comment that 'These two collections may represent an undescribed species'.

Although Blake did eventually study live material in 1971 and 1972, he never followed up his comment and the material has remained undetermined at the Queensland Herbarium. Using the key published by Blake (1971) for his revision of *Plectranthus* in Australia and adjacent regions, live material was keyed to *P. apreptus* S.T. Blake described from the wet tropics of north Queensland. In a number of characters the Blackdown Tableland material was also similar to *P. gratus* S.T. Blake and the recently described *P. arenicola* ('*arenicolus*') P. Forster (Forster 1991); however, it differed significantly in a number of characters from all three of these species. It is described here as a new species.

TAXONOMY

Plectranthus blakei P. Forster *sp. nov.* affinis *P. apreptus* S.T. Blake a quo glandulis sessilibus in caulibus, foliorum lamina glauca supra et indumento flavido utrinque, corolla 13–16 mm longa differt.

TYPUS: Queensland, Leichhardt District — Mimosa Creek near aboriginal art, Blackdown Tableland National Park, 23° 48'S, 149°05'E, 16.v.1984, *P.I. Forster 1782* (**HOLOTYPE:** BRI, 2 sheets. **ISOTYPE:** CANB, K, MEL, NSW *distribuendi*).

ILLUSTRATION: K.A.W. Williams, Native Pl. Queensland 1: 238–239 (1979) [as *Plectranthus* sp.]

Subshrub to 40 cm high, foliage sweetly scented. *Stems* or lateral branches erect, the lower woody part often straggling and up to 6 mm thick, with a thickened, somewhat tuberous base; upper parts with a dense indumentum of antrorse 4–5-celled yellow hairs up to 1 mm in length but commonly much shorter, occasional gland-tipped trichomes and many sessile, yellow glands particularly below the inflorescence. *Leaves* long-petiolate; lamina ovate to deltoid, 2–6 cm long, 12–40 mm wide, dull green, fleshy, paler beneath, not colouring purplish in strong light; serrate to dentate with 7–12 pairs of short broad teeth, rarely with 1 or more secondary teeth; with dense indumentum of clear to yellow antrorse hairs on both surfaces; many sessile yellow glands below, few to none above; veins impressed above, prominent below; petiole 10–30 mm long, 1.7–2 mm diameter.

* Queensland Herbarium, Meiers Road, Indooroopilly, Queensland, Australia 4068.

Inflorescence cymose comprising 1(3) branches; each branch pedunculate, 10–30 cm long, *c.* 2 mm diameter; axis with sparse indumentum of yellow antrorse hairs and minute gland-tipped hairs, scattered sessile glands. *Verticillasters* 4–9 flowered, 12–22 mm apart; pedicels 4–5 mm long, 0.5–0.7 mm diameter, with dense indumentum of gland-tipped trichomes. *Calyx* 2.7–3 mm long, with a dense indumentum of gland-tipped and eglandular trichomes and sessile, yellow glands. *Corolla* 13–16 mm long, lilac-blue; tube 7–8 mm long, abruptly curved below middle making an angle of 90–120°, slightly inflated upwards and then constricted to the slightly oblique mouth, glabrous; upper lobes 4–4.1 mm long, 3–3.2 mm wide, subcircular, standing more or less erect at between 90 and 110° to the lip, with sparse eglandular trichomes, no sessile yellow glands; lateral lobes 3–3.2 mm long, 1–1.7 mm wide, white in middle, with sparse eglandular trichomes, no sessile yellow glands; lower lip 9–10 mm long, 8–9.5 mm wide, oblique, with sparse eglandular trichomes, no sessile yellow glands. *Style* purplish-blue, 13–15 mm long, *c.* 1 mm diameter. *Stamens* 4, 7–9 mm long, *c.* 0.2 mm diameter, fused to the tube in the bottom for *c.* 5 mm; anthers *c.* 0.5 mm long and 0.3 mm wide. *Fruiting calyx* 4.5–5 mm long, with glandular and eglandular trichomes and sessile yellow glands; upper lobes *c.* 4 mm long and 2.5 mm wide, broadly ovate, tip acute; lateral

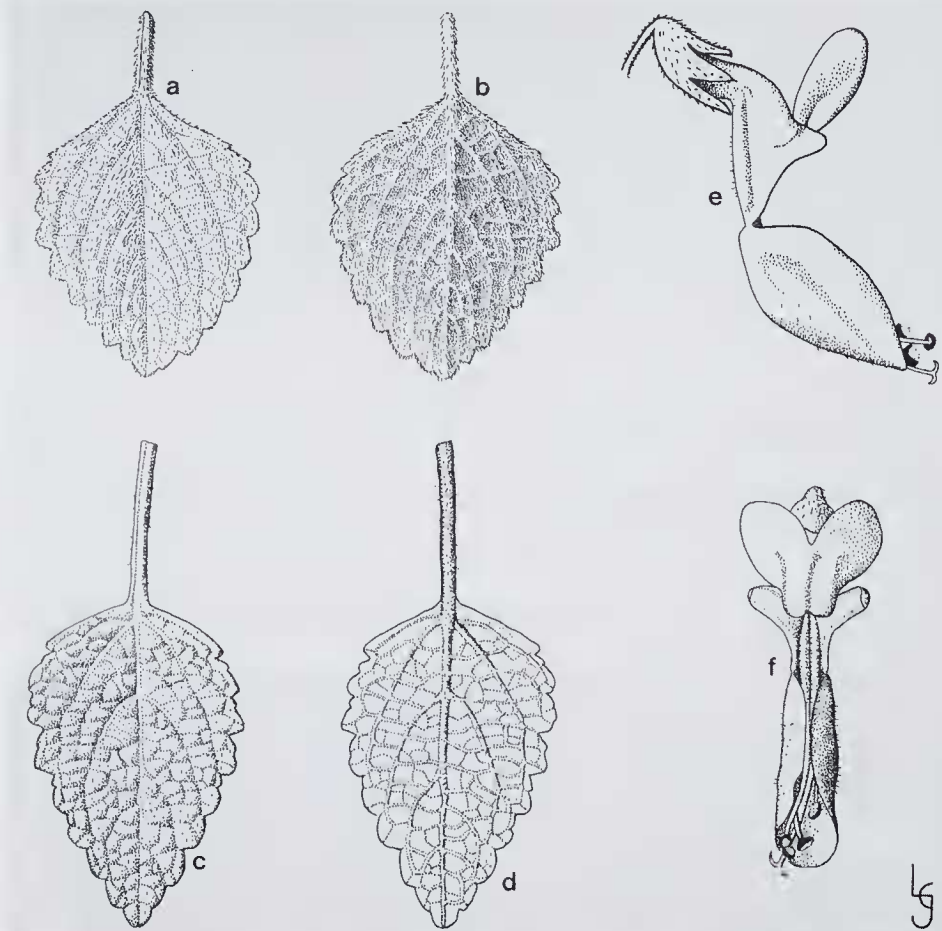


Fig. 1. a-b, e-f — *Plectranthus blakei* (Forster 1782), c-d — *P. apreptus* (Forster 4346 & Tucker). a & c — upper leaf surface $\times 1$. b & d — lower leaf surface $\times 1$. e — side view of flower $\times 5$. f — face view of flower $\times 5$. Del. L.G. Jessup.

lobes lanceolate, *c.* 1.5 mm long and 1 mm wide; lower lobes lanceolate, *c.* 3 mm long and 1 mm wide, incurved; tube 3–3.5 mm long. *Seed* flattened, spherical, 0.9–1 mm long, 0.7–0.8 mm wide, *c.* 0.4 mm thick. (Fig. 1)

ETYMOLOGY:

Named for Stanley Thatcher Blake (1911–1973), a former member of staff at the Queensland Herbarium (BRI) who provided the first revision of the genus *Plectranthus* in Australia and made a tremendous contribution both to the herbarium collections of Australian plants at that institution (over 23 000 numbers) and to Australian taxonomic botanical literature (Everist 1976).

DISTRIBUTION AND CONSERVATION STATUS:

Plectranthus blakei is only known from the Blackdown Tableland in the Leichhardt district in southern central Queensland which is an area of raised sandstone escarpments (Henderson 1976). Much of the Blackdown Tableland is now a National Park and most of the collections of this plant have been from within the Park boundaries. An appropriate conservation coding is 2RC (Briggs & Leigh 1989).

HABITAT NOTES:

Plants of *P. blakei* grow on sandstone rock outcrops and ledges surrounded by open eucalypt-dominated forest at altitudes of 800–900 m. Other plants growing in close association include *Hoya australis* subsp. *australis*, *Calandrinia pickerlingii*, *C. pleiopetala*, *Plectranthus parviflorus* and *Portulaca bicolor*.

AFFINITIES:

Plectranthus blakei belongs to the complex of species comprising *P. apreptus*, *P. arenicola* and *P. gratus* from Australia and *P. forsteri* Benth. from the Pacific. The major diagnostic features of the four Australian species are compared in Table 1. It should be noted that although Blake (1971) describes the leaves of *P. apreptus* as dull green, in his accompanying illustration of a live plant they are distinctly glossy and this is the case with the live material that I have examined (*Forster 4346 & Tucker*, BRI, CBG, K, L, MEL, NSW, QRS).

Both *Plectranthus arenicola* and *P. blakei* can be keyed in Blake's key, if the couplets leading into *P. gratus*, *P. forsteri* and *P. apreptus* are replaced with the following:

Leaf teeth pairs 3–6:

Stems with thickened tuberous base; hairs on stem to 2.7 mm long; floral axis without sessile glands; corolla 11–12 mm long..... *P. arenicola*
 Stems without thickened tuberous base; hairs on stem to 0.55 mm long; floral axis with sessile glands; corolla 3–8 mm long..... *P. forsteri*

Table 1. Comparison of characters for Australian *Plectranthus* species allied to *P. blakei*.

Character	Species			
	<i>apreptus</i>	<i>arenicola</i>	<i>blakei</i>	<i>gratus</i>
stems with sessile glands	—	—	+	+
maximum length of hairs on stem (mm)	1.2	2.7	1.0	1.0
stems with thickened ± tuberous base	—	+	+	—
number of leaf teeth pairs	7–15	4–6	7–12	3–6
leaves with sessile glands above	—	—	+	+
upper leaf surface glossy	+	—	—	—
floral axis with sessile glands	+	—	+	+
number of flowers per verticillaster	6–10	10	4–9	10–20
distance between verticillasters (mm)	5–20	11–12	12–22	7–13
pedicel length (mm)	2.5–7.5	3–4	4–5	2.5–5
corolla length (mm)	7–12	11–12	13–16	7–11

Leaf teeth pairs 7–23:

Stems with thickened tuberous base; leaf indumentum drying yellow; corolla 13–16 mm long..... *P. blakei*

Stems without thickened tuberous base; leaf indumentum drying clear; corolla 7–12 mm long:

Stems with sessile glands; upper leaf surface dull; verticillasters with 10–20 flowers..... *P. gratus*

Stems without sessile glands; upper leaf surface glossy; verticillasters with 6–10 flowers..... *P. apreptus*

FURTHER SPECIMENS SEEN: (all BRI)

Queensland: Leichhardt District — Blackdown Tableland, 12 miles SSE of Bluff, Two Mile Creek, 22.ix.1959, *R.W. Johnson 1102*; Blackdown Tableland, c. 32 km SE of Blackwater (campsite on Mimosa Creek), 20.iv.1971, *R.J. Henderson 699, S.B. Andrews & P. Sharpe*; Blackdown Tableland, c. 35 km SE of Blackwater (campsite at old stockyard on Mimosa Creek), c. 1.2 km WNW of campsite, 4.ix.1971, *R.J. Henderson 973, L. Durrington & P. Sharpe*; c. 6 km W of Forestry Camp on Mimosa Creek, Blackdown Tableland, 23°47'S, 149°07'E, 3.ix.1974, *K.A.W. Williams 74035*; Stony Creek track, Blackdown Tableland, c. 6.5 km W from Forestry Camp, Mimosa Creek, 23°49'S, 149°07'E, 7.ix.1974, *K.A.W. Williams 74050*; Rockland Spring about 24 miles SW of Dingo, 23°55'S, 149°00'E, 22.ix.1959, *C.H. Gittins 906. Moreton District* — Cultivated at The Gap, Brisbane (ex Blackdown Tableland), xi.1971, *S.T. Blake 23750*; *ibid*, ix.1972, *S.T. Blake 23791*.

ACKNOWLEDGEMENTS

L.G. Jessup provided the drawings. L. Pedley provided the Latin translation of the diagnosis. Permission to collect in Blackdown National Park was granted by the Queensland National Parks and Wildlife Service and assistance in the field was provided at the time by S. Pearson.

REFERENCES

- Blake, S.T. (1971). A revision of *Plectranthus* (Labiatae) in Australasia. *Contrib. Qld. Herb.* No. 9: 1–120.
- Briggs, J.D. & Leigh, J.H. (1989). 'Rare or threatened Australian plants 1988 revised edition.' (Special publication no. 14. Aust. Natl Parks & Wildlife Serv.: Canberra.)
- Everist, S.L. (1974). Stanley Thatcher Blake — botanist extraordinary. *Queensland Nat.* 21: 31–32.
- Forster, P.I. (1991). *Plectranthus arenicolus* (Lamiaceae), a new species from Cape York Peninsula, Queensland. *Muelleria* 7: 375–378.
- Henderson, R.J.F. (1976). History and floristics of the Blackdown Tableland, central Queensland. *Queensland Nat.* 21: 119–124.

Manuscript received 21 November 1990; revised 3 April 1991.